



**TABLE 2: 2015 Stormwater Management Plan - Revised 2019**

BMP/Action	Description/Method of Implementation	Minimum Measures						TMDL	Frequency/Schedule	Method of Evaluating Effectiveness	Progress	
		PP/IP	PEP	IDEP	Construction Stormwater Control	Post-Construction Stormwater Control	PP/Municipal Good Housekeeping					
<b>Enforcement Response Procedures (ERPs)</b>	See Attachment A (Chapter 29 of City of Kalamazoo Code of Ordinances - Stormwater); Attachment B (Chapter 30 of Code - Soil Erosion and Sedimentation Control); Appendix A of Code, Section 8.3H (Site Plan Review); Section 10 (Violations, Penalties and Enforcement).			X	X	X			As needed.	Enforcement as necessary.		
<b>Public Participation/Involvement Program</b>	See Attachment B.	X							See Attachment B	See Attachment B.		
<b>Public Education Plan</b>	See Table 3.		X						See Table 3	See Table 3.		
<b>Illicit Discharge Elimination Plan KVCC BMP5</b>	See Attachment C, Figures 3 and 4, Tables 1 and 4.			X					See Attachment C	See Attachment C.		
<b>Construction Stormwater Runoff Control Program</b>	Continue Soil Erosion & Sedimentation Control Program. Per Ordinance 1790, permit and enforce soil erosion and sedimentation controls associated with construction sites, per Part 31. Both the City's Code Enforcement Division and the Engineering Division are APAs for Part 91, addressing construction sites and street/utility work, respectively.				X				Continue APA status for enforcing Act 91.	Continued certification for APA status; number of Permits issued; enforcement of Ordinances and policies; reduction in TSS.		
<b>Documentation of Post-Construction Stormwater Control for New and Redevelopment Projects.</b>	Current: Performance Standards for Groundwater Protection within Wellhead Protection Capture Zones and Stormwater Quality Management (Ordinance No. 1826); Pending: Updates.						X		Continuous. Updates by October 1, 2015	Effective use and enforcement of Ordinance; updates in 2015.		
<b>Continue Site Plan Review process using the Wellhead Protection Zoning Overlay Ordinance and Performance Standards Ordinance.</b>	Per Ordinances 1825 and 1826, require stormwater pre-treatment prior to discharge into the City's MS4 or directly into the surface waters. Appendix A of Code, Section 8.3. Pending: Updates for Performance Standards.				X	X			Continuous. Updates by October 1, 2015	Number of site plans reviewed; number of required pre-treatment BMPs; number of natural BMPs; reduction in TSS; updates in 2015.		
<b>Employee and Contractor Training.</b>	Continue use of the Excal DVD "Storm Watch Municipal Storm Water Pollution Prevention" and/or the MDEQ DVD "Storm Water Employee Training" for employee training. In addition, the Technician 3 staff will watch the more specific IDEP focused DVD "Illicit Discharge Detection & Elimination A Grate Concern."							X	All staff within 5 year Permit cycle. New hires within 1 year of hire. Contractors to begin viewing Storm Watch DVD in 2016 if they do not have staff with Stormwater Certification.	Number of employees trained; integration of stormwater control requirements into bid specifications Contractor training/certification documentation.		
<b>List structural stormwater controls.</b>	List by Table all municipally owned properties with stormwater structural controls.							X	X	Continuous maintenance of list of municipal properties and structural stormwater controls with locations.	Completion of list with locational information; maintenance of updated list.	

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<b>Inspect, perform maintenance, and evaluate all Stormwater Controls.</b> <i>KVCC BMP6</i>	Inspect, perform maintenance as needed, and evaluate for effectiveness each City-owned stormwater control identified within this SWMP.							X	X	Annual inspections of all City-operated stormwater controls.	Continuation and possible enhancement of inspection program; completion of identified needed maintenance; proper disposal of associated waste generated from maintenance.	
<b>Continue street sweeping program.</b> <i>KVCC BMP2</i>	Use one to two Elgin Pelican series street sweepers to clean streets. A contractor removes the dumpsters that the sweepers deposit the debris in and delivers it to a Class II landfill. The same contractor tracks the volume of the debris accumulated.							X	X	On average, weekly sweeping for downtown area, and two to three times annually for the remaining City.	Number of sweepings, pounds of material collected and disposed; reduction in TSS.	
<b>Continue Leaf Collection Program.</b> <i>KVCC BMP3</i>	Residents are asked to rake their leaves in the late fall into the edge of the street in accordance with a published schedule. City crews then use a combination of tractors, front-end loaders and compactor trucks to collect the leaves. Cycle is repeated (weather permitting). Collected leaves are hauled and deposited at a city composting facility.							X	X	Bi-Annual publication of "A View From the Curb The City's Guide to Waste & Recycling."	Volume of leaves collected and disposed; estimated pounds of phosphorus prohibited from entering surface waters and clogging storm sewers; continued Bi-Annual publication of "A View From the Curb The City's Guide to Waste & Recycling"; reduction in phosphorus loadings.	
<b>Continue Brush Pick-up Program.</b> <i>KVCC BMP3</i>	A private contractor currently performs brush collection once a month from May through October on the same day as bulk trash (see below). Residents are asked to place bundled brush in the curb lawn for collection in accordance with the published monthly bulk trash collection schedule.							X	X	Per published monthly schedule from May through October on the same day as bulk trash. Bi-Annual publication of "A View From the Curb The City's Guide to Waste & Recycling."	Volume of brush collected; estimated pounds of phosphorus prohibited from entering surface waters, and clogging storm sewer; continued Bi-Annual publication of "A View From the Curb The City's Guide to Waste & Recycling"; reduction in phosphorus loadings.	
<b>Continue Bulk Trash Collection Program.</b>	A private contractor performs bulk trash collection for the City. Curbside collection is provided to residential properties with four units or less. All other properties must contract individually with private companies for trash removal. Residents place bulk trash near the curb for collection in accordance with a published schedule. A limit of 7.7 cubic yards per property per month is currently in place.							X		Monthly, per published schedule. Bi-Annual publication of "A View From the Curb The City's Guide to Waste & Recycling."	Volume of bulk trash collected; continued Bi-Annual publication of "A View From the Curb The City's Guide to Waste & Recycling."	
<b>Catch Basin/Inlet Cleaning.</b> <i>KVCC BMP7</i>	Due to budget/staff constraints, there is currently no scheduled stormwater catch basin/inlet cleaning program. However, cleanings are performed on a requested and urgently needed basis (e.g., localized flooding), and associated with IDEP investigations as needed. Waste collected is by vector trucks or by hand and are disposed of at the Wastewater Treatment Plant, unless it is determined that it be necessary to dispose of it at a Type II Landfill or by a certified hazardous waste hauler determined location.							X	X	As requested and on an "as needed" basis.	Adequate response to internal and citizen requests.	
<b>Snow and Ice Removal Program.</b> <i>KVCC BMP1</i>	The City applies rock salt, rock salt with liquid calcium chloride, rock salt with sand mix, a pre-wetting de-icing material, and is experimenting with beet juice to maintain safer roadway travel while reducing rock salt usage. Product use is largely dependent upon weather conditions. Other agricultural products, such as corn-based products, are also being evaluated. In addition, the Kalamazoo Mall uses a snowmelt system instead of salting.							X		As needed.	The amount of rock salt and sand mix used under appropriate conditions. Strategy to reduce the use of sand	

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<b>Continue Use of Enclosed Salt Storage Facility.</b>	Rock salt is stored in an enclosed above-ground salt storage facility with a capacity of 7,000 tons, above the 100-year flood plain elevation.							X		Continuous: Use enclosed salt storage facility located at the Harrison Street Facility.	Continued use of enclosed above-ground facility; compliance with SWPPP for wastewater treatment plant.
<b>Continue implementation of SWPPP for the 415 Stockbridge Avenue Facility.</b>	Since this the fleet maintenance operation at this location meets the criteria for which a SWPPP is necessary, one was prepared.							X		Continuous: Fleet Director or representative to maintain stormwater certified operator status, implement inspections and continue BMPs.	Acquired Stormwater Certified Operator License(s); number of inspections; number of BMPs implemented; overall SWPPP compliance.
<b>Continue Recyclable Material Collection Program.</b>	There are three components to the City's residential recycling program: weekly curbside residential collection for all residential properties with four units or less; multi-unit collection for those property owners or managers willing to participate; and a recycling drop-off facility is available to all citizens.							X		Annual evaluation to continue program. Bi-Annual publication of "A View From the Curb The City's Guide to Waste & Recycling."	Volume of materials collected and number of participants; continued Bi-Annual publication of "A View From the Curb The City's Guide to Waste & Recycling."
<b>Continue Household Hazardous Waste Collection.</b>	City residents are able to dispose of their hazardous waste at the Kalamazoo County Household Hazardous Waste Center, 1301 Lamont Avenue, free of charge. Each year the City enters into a contract with Kalamazoo County, which shares proportionally the cost with all participants to operate the program.							X		Re-evaluate and propose renewal of contract on an annual basis. Bi-Annual publication of "A View From the Curb The City's Guide to Waste & Recycling."	Continued contracts with Kalamazoo County; volume and type of materials collected and number of participants; continued Bi-Annual publication of "A View From the Curb The City's Guide to Waste & Recycling."
<b>Environmental Safer Products.</b>	The City Commission Policy for "Procurement of Recycled & Environmentally Friendly Products" is provided as Attachment 1.							X		2015: Continue current policy; 2016: Review and consider updates/revisions.	Continuation and/or enhancement of existing policy.
<b>Waterway Vegetative Buffers.</b>	Continue use of the City's "Lawn Care Guidelines for Parks, Greenspaces, and Along Waterways" and discussion with staff and seasonal employees during annual "training day."							X		2014: Continue current policy; 2015: Review and consider updates/revisions. By 2015, incorporate specifications into lawn mowing contracts for subcontractors.	Continuation and/or enhancement of existing policy; number of existing vegetative buffers maintained and new ones installed along waterways. Incorporation of specifications into contracts.
<b>Lawn Care Guidelines.</b> <i>KVCC BMP3</i>	Continue use of the City's "Lawn Care Guidelines for Parks, Greenspaces, and Along Waterways" and discussion with staff and seasonal employees during annual "training day."							X		2015: Continue current policy; 2016: Review and consider updates/revisions. By 2017, incorporate specifications into lawn mowing contracts for subcontractors.	Continuation and/or enhancement of existing policy. Effective communication with lawn maintenance employees and temporary seasonal hires regarding policy. Incorporation of specifications into contracts.
<b>Reduction of Pesticides, Herbicides, and Fertilizers.</b> <i>KVCC BMP4</i>	The City has a "Pesticide/Herbicide Advisory Committee" to monitor the use of pesticides and herbicides in the City and recommend policies and guidelines. Also, continue use of the City's "Lawn Care Guidelines for Parks, Greenspaces, and Along Waterways" and discussion with staff and seasonal employees during annual "training day."							X		2015: Continue current policy; 2016: Review and consider updates/revisions.	Continuation and/or enhancement of existing policy.